

## NOTICES \*

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2. \*\*\*\* shows the word which can not be translated.
3. In the drawings, any words are not translated.

## CLAIMS

## [Claim(s)]

[Claim 1] The ink-jet image recording medium characterized by preparing one or more layers containing polyvinyl alcohol on a base material apart from one or more layers which contain at least one sort of polymer which has (a) alkylene oxide chain as the ink fixed bed, and the (b) above-mentioned (a) layer.

[Claim 2] (a) The ink-jet image recording medium according to claim 1 characterized by preparing the layer in the base material side from the (b) layer.

[Claim 3] (a) The ink-jet image recording medium according to claim 1 or 2 characterized by the polymer which has the alkylene oxide chain of a layer being the polymer which the hydroxyl group of a polyethylene-oxide end and the compound in which a reaction is possible are made to react to a polyethylene oxide, and is obtained.

[Claim 4] (a) The ink-jet image recording medium according to claim 1 or 2 characterized by the polymer which has the alkylene oxide chain of a layer being the polymer which the compound in which a reaction is possible is made to react to a polyethylene oxide and a polysiloxane to both the end hydroxyl group of a polyethylene oxide, and the end functional group of a polysiloxane, and is obtained.

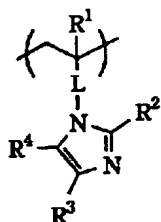
[Claim 5] The ink-jet image recording medium according to claim 3 by which a polyethylene-oxide end hydroxyl group and the compound in which a reaction is possible are characterized by being a diisocyanate compound or triisocyanate compound.

[Claim 6] The ink-jet image recording medium according to claim 4 which a polysiloxane end functional group is a hydroxyl group, and is characterized by the compound in which a reaction is possible being a diisocyanate compound or triisocyanate compound to both a polyethylene-oxide end hydroxyl group and a polysiloxane end functional group.

[Claim 7] The ink-jet image recording medium according to claim 1 to 6 characterized by the ink fixed bed containing the polymer mordant which has the repeat unit expressed with the following general formula (1).

[Formula 1]

一般式(1)



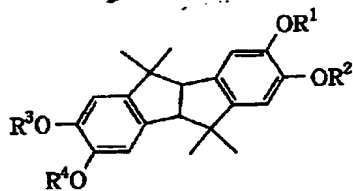
(R1, R2, R3, and R4 being the same or the bivalent connection [ in which it differs and a hydrogen atom or the alkyl group of carbon numbers 1-6 is shown ] machine which L becomes from the combination of single bond or an alkylene machine, an arylene machine, -CO-, -O-, -NH-, or these bases is shown among a general formula (1).)

[Claim 8] The ink-jet image recording medium according to claim 1 to 7 characterized by being the paper which the layer to which a base material uses as a binder at least one sort of polymer chosen from the group which is plastic film or consists of a polymer of a polyolefine and an aryl group substitution vinyl monomer laminates on the front face.

[Claim 9] The ink-jet image recording medium according to claim 1 to 8 characterized by one of layers containing the compound expressed with the compound or the following general formula (3) expressed with the following general formula (2).

[Formula 2]

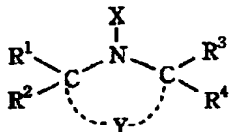
一般式(2)



(the inside of a general formula (2), and R1-R4 are the same -- or it differs and an alkyl group is shown)

[Formula 3]

一般式(3)



(Y shows a nonmetallic atom group required to form 5 - 7 member ring with a carbon atom and a nitrogen atom among a general formula (3).) X shows an alkyl group, an alkenyl machine, an alkynyl group, an aryl group, an acyl group, a sulfonyl machine, a sulfinyl machine, an oxy-radical machine, an alkoxy group, an aryloxy group, an acyloxy machine, or a hydroxyl group. R1-R4 are the same -- or it differs and a hydrogen atom or an alkyl group is shown Here, R1-R4 and any two bases in Y may join together, and 5 - 7 member ring may be formed.

[Claim 10] The ink-jet record method using an ink-jet image recording medium according to claim 1 to 9.

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